

REMARKS

Responsive to the objection to the disclosure, a Substitute Specification and Abstract is submitted herewith to place the case in better English form. The Substitute Specification and Abstract contains no new matter. In order that the examiner can satisfy himself in this regard, also submitted herewith is a marked-up copy of the original Specification and Abstract from which the Substitute Specification and Abstract was typed.

With regard to the units for surface roughness Rz, it is respectfully submitted that one skilled in the art would recognize that the values given in applicants' specification carry the standard micron units for Rz, as evidenced, for example, by copies of U.S. 6,708,594, U.S. 6,706,459 and U.S. 6,705,806 submitted herewith. See Tables 1-3 and 6, 1 and 3-5, respectively of these U.S. patents.

Responsive to the examiner's objections to the claims as set forth in paragraph 1 of the office action, claims 1-24 have been rewritten as claims 25-48, respectively. With regard to the wording of new claim 25, the examiner's attention is directed to page 5, line 10 to page 6, line 20 of the original specification. With regard to the wording of new claim 26, the examiner's attention is directed to the last seven lines of page 11 and the first 6 lines at page 12. Also see page 34, lines 5-8 of the original specification.

The objection to claim 3 as set forth in paragraph 2 of the office action has been addressed by the rewording of that claim now presented as claim 27. It is respectfully submitted that the limitation with regard to the nature of the apparatus used in the claimed method, is a proper limitation of the method claim.

It is believed that the rejection of claims 2, 5, 9, 14 and 17-19 for indefiniteness, as set forth in paragraph 4 of the office action, is moot in view of the rewriting of these claims. As noted above, claim 26 replaces claim 2 and finds corresponding description at pages 11, 12 and 34, as noted above.

New claim 29 which replaces claim 5 has been reworded to better define a range and to recite the aforementioned conventional units for Rz.

Claim 33, replaces claim 9. The additional method step recited therein involves reciprocating movement of one shaft relative to the other between a parallel relationship and an angled relationship.

Regarding claims 14, 17, 18 and 19, it is believed that the examiner's rejections have been obviated by the wording of new claims 38, 41, 42 and 44, respectively.

The rejection of claims 1-3, 5, 7-9, 11-13 and 20 for anticipation by Hosoya is respectfully traversed. The examiner characterizes Hosoya as disclosing "supplying non

abrasive aqueous solution,” but the undersigned could find no such teaching in Hosoya. At column 6, lines 10-16 teaches “supplying a working liquid between these two gears...” However, there is no suggestion in the teachings of Hosoya that the “working liquid” be either water or an aqueous solution or any other liquid which would promote oxidation. On the contrary, the teachings of Hosoya are to the effect that an anti-corrosive atmosphere should be employed. See column 7, lines 20 and 21 and also column 7, lines 54 and 55.

In all embodiments of Hosoya, the finishing is by grinding. Accordingly, claims 49 and 50 newly added here define the invention in terms further removed from the teachings of Hosoya. For a description corresponding to newly added claims 49 and 50, the examiner’s attention is directed to page 6, lines 2-20.

Claim 26 further distinguishes the present invention from anything suggested by Hosoya, because the master gear of Hosoya is a grinding gear which would not be incorporated into a transmission.

Claim 27 further distinguishes the present invention from Hosoya because a differential between materials of the gears, in terms of susceptibility to oxidation, would make no sense in the context of Hosoya which does not utilize oxidation in its process but, rather, seeks to avoid an oxidative (corrosive) atmosphere.

Claim 30 further distinguishes the present invention from that of Hosoya in that

utilization of one of the corrosive agents recited by claim 30 would be contrary to the teachings of Hosoya to the effect that a corrosive atmosphere should be avoided.

No reference of record suggests axial reciprocation of the gears relative to each other as recited by claim 31.

No reference of record suggests repeatedly increasing and decreasing distance between axes of the gears as recited by claim 32.

The rejection of claims 4, 10 and 14 for obviousness over Hosoya, as set forth in paragraph 7 of the office action is respectfully traversed for the reason that, as noted above, Hosoya neither discloses nor suggests utilization of water, aqueous solution or any agent promoting oxidation. The rejection is further traversed because whatever parameters might be “desired” in Hosoya would not necessarily be desired in the method of the present invention because the two methods are based on different operating principles.

The rejection of claim 6 as set forth in paragraph 8 of the office action, i.e., for obviousness over Hosoya in view of Igrashi et al is also traversed. Firstly, the use of corrosive agents is, as noted above, is contrary to the teachings of Hosoya. Further, even if the cutting oils of Igrashi were to be employed in the process of Hosoya, contrary to the teachings of Hosoya, the result would not be use of water or an aqueous solution as required by claim 6 here.

The rejection of claims 10 and 19 for obviousness over Hosoya in view of Takahashi, as set forth in paragraph 9 of the office action, is traversed for the same reasons that the rejections over Hosoya alone are traversed above. Takahashi et al teaches neither the use of water, nor an aqueous solution, nor mechano-chemical action.

The rejection of claims 15-18 over Hosoya in view of McGlasson et al, as set forth in paragraph 10 of the office action is respectfully traversed, again for the same reasons that the rejections based on Hosoya alone are traversed above. Further, the teachings of McGlasson et al lead away from the present invention in that the lapping taught therein involves the introduction of a “lapping compound.”

Finally, the rejection of claims 21-24 for obviousness over Hosoya in view of Miyauchi is respectfully traversed because neither reference discloses “water supply means”. As the examiner correctly notes Miyauchi teaches only an oil recovery system.

In conclusion, it is respectfully requested that the examiner reconsider the rejections of record with a view toward allowance of the claims as amended.

Respectfully submitted,

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